

REMARKS

The indication of allowable subject matter in claims 6-14, 22, 23 and 25, as is the Examiner's detailed and clear Office Action, is acknowledged and appreciated. In view of the following remarks, it is respectfully submitted that all claims are patentable over the cited prior art.

Claim 1 is the sole rejected *independent* claim and stands rejected under 35 U.S.C. § 103 as being unpatentable over Ono et al. '551 ("Ono") in view of Cobbley et al. '832 ("Cobbley") and Izumi et al '408 ("Izumi"). This rejection is respectfully traversed for the following reasons.

A. Proposed combination does not disclose claimed invention

1) Non-analogous art

The Examiner alleges that Izumi is analogous because "Izumi teaches heating to soften the adhesive and making a separation step when deficiency is found in either one of the two substrates, therefore Izumi is concerned about one of the particular problems of the present invention." It is respectfully submitted that the Examiner has improperly characterized the teachings of Izumi. That is, Izumi is directed to deficiencies in *sealed substrates* whereas the present invention is concerned with electrical connections between substrates *that have not yet been sealed*.

In particular, Izumi discloses separating substrates, when a deficiency in a substrate is discovered, that have already been fully adhered together *across entire opposing surfaces* thereof using an adhesive agent 3. In contrast, the present invention is concerned with substrates that are adhered together through *discrete* bonding connections (i.e., not across entire opposing surfaces). This distinction emphasizes the more general

distinction that the present invention is directed to *testing electrical connections* at point contacts and separating substrates *before* encapsulation *as part of the testing process*, whereas Izumi is directed to separating substrates for an undefined substrate deficiency (e.g., cracked substrate) *after* encapsulation and independent of testing of electrical connections (e.g., structural deficiency of substrate). Izumi is completely silent as to testing point contacts and indeed does not provide any details as to the “deficiencies” of the substrate that would lead to a separation step.

In summary, although Izumi discloses a separation process that includes a heating step, the separation/heating of Izumi corresponds to substrate deficiencies (which are not described by Izumi) that are completely unrelated to the testing of electrical connections of the present invention. In particular, Izumi is directed to the problem of separating fully sealed substrates across entire opposing surfaces thereof when a so-called deficiency is found in a substrate (e.g., deficiency may simply be a cracked substrate), whereas the present invention is directed to the problem of separating substrates *as part of a testing procedure* where opposing substrates are in point contact for testing electrical properties thereof. Accordingly, Izumi is not concerned with the same problems as the present invention.

2) Izumi suggests heating for after the Encapsulate step of Cobbley

The Examiner further argues that “Cobbley was relied on for the teaching of testing/reworking, not heating.” It is respectfully submitted that the Examiner may have misunderstood Applicants’ previously filed arguments. That is, Applicants did not argue that Cobbley’s heating is not part of the testing/reworking process. Indeed, the Examiner has already admitted as such by relying on Izumi for the heating step. However, it is

respectfully submitted that the heating step disclosed in Izumi for separating substrates would at best correspond to a period *after* the encapsulate step of Cobbley.

The Examiner further alleges that the “combination of Ono et al. and Cobbley et al. is modified with adhesive heating step of Izumi that is used for separation when deficiency is found in either one of the two substrates showed in Izumi.” However, Izumi suggests using the heating/separating steps for *sealed* substrates so that any modification of Cobbley based on the teachings of Izumi would result in heating/separating the substrates of Cobbley *after* the encapsulate step. There is no suggestion or motivation from the prior art that suggests using the heating/separating steps of Izumi as part of the reworking/testing process of Cobbley performed *before* encapsulation. Only Applicants’ specification provides the requisite motivation for such a combination whereby during the testing step of *electrical connections* a heating step is used to separate substrates adhered together by *point contacts* which failed the testing. Indeed, substrates which pass the test are then encapsulated to form a device similar to that disclosed in Izumi (wherein Izumi suggests only heating/separating such an *encapsulated* device). Any attempt to use the heating/separating step of Izumi during the testing/reworking steps of Cobbley, before encapsulation, would necessarily be based solely on improper hindsight reasoning using only Applicants’ specification as a guide to reconstruct the claimed invention.

Izumi does not suggest heating point contacts for separation but only completely sealed substrates. Indeed, the adhesive agent 3 includes conductive particles 8 *in combination* with an insulating layer 7 to form a complete layer across the entire surfaces of the substrates rather than the point bonding of Cobbley.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested *by the prior art*. (emphasis added)(citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claim 1 because the proposed combination fails the "all the claim limitations" standard required under § 103.

B. Proposed combination improper

As a preliminary matter, it is respectfully submitted that the Examiner has not addressed all of the arguments previously made with respect to the proposed combination being improper. The Examiner is directed to MPEP § 707.07(f) under the heading "Answer All Material Traversed", which requires the Examiner to respond to all arguments raised in Applicants' response, including each of plural arguments directed against the proposed combination.

In the instant case, it is respectfully submitted that the Examiner has not answered Applicants' traverse with respect to (1) modifying a modifying reference and (2) reliance on case law. Accordingly, if the Examiner maintains the pending rejections, it is respectfully requested that the Examiner respond to the following arguments.

1) Modifying a modifying reference

It is respectfully submitted that the Examiner has improperly modified a modifying reference. Although it is understood that there is no limit to the number of references that can be used to modify a *primary* reference in an attempt to reach the

claimed invention, it is respectfully submitted that using a third reference to modify a feature taught in a *secondary* reference used to modify the primary reference is too attenuated from the claimed invention to be considered obvious.

In the instant case, the Examiner relies on Ono as the primary reference, and then relies on Cobbley as the secondary reference for modifying Ono by adding the testing procedure. The Examiner then modifies the testing procedure of Cobbley (i.e., secondary reference) with the heating disclosed by Izumi. Accordingly, the Examiner has improperly modified a modifying reference.

2) Reliance on case law

Furthermore, it is respectfully submitted that the Examiner's reliance on case law set forth in MPEP § 2144.07 as the motivation to make the proposed combinations is misplaced. As discussed in MPEP § 2144, the examiner may use the rationale used by the court only if the facts in a prior legal decision are sufficiently similar to those in an application under examination.

The Examiner relies on MPEP § 2144.07 under the heading "Art Recognized Suitability for an Intended Purpose" as support for the assertion that "one of ordinary skill in the art would have been motivated to look to alternative suitable methods of performing the disclosed formation of the semiconductor unit" However, the cited case law in MPEP § 2144.07 does not suggest seeking alternative methods *generally* as relied on by the Examiner. Instead, the case law in MPEP § 2144.07 describes *specific* fact patterns where selection of known materials having known uses, selected for their known uses, is obvious. The Examiner has not identified how those facts are similar to the facts of the present application, and it appears that no such correlation exists. For

example, the Examiner's modification alleges obviousness of the claimed process steps and materials *functionally related to the method steps* (e.g., low melting point metal in claim 5), whereas the cited case law refers merely to material selection *per se* whose desired purpose is already known.

For all the foregoing reasons, it is respectfully submitted that claim 1 is patentable over the cited prior art.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

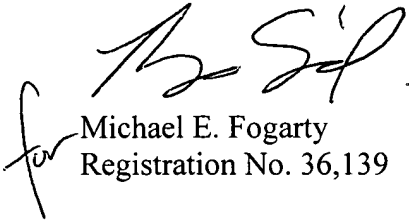
CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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